

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/198,534 11/24/98 BAN

S 48864-014

020277
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WM31/0508

EXAMINER

BALI, V	
ART UNIT	PAPER NUMBER

2623
DATE MAILED:*4*
05/08/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/198,534

Applicant(s)

BAN ET AL.

Examiner

Vikkram Bali

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Millstein (US 5821941).

With respect to claim 1, Millstein discloses: a data processing apparatus for processing 3-dimensional form data of an object, said data processing apparatus comprising a modifying unit which modifies at least apart of the 3-dimensional form data based on 2-dimensional image data of the object, (see col. 2, lines 15-18, wherein, modification of the 3-d object takes place using 2-d constraints) as claimed.

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Claim 14 is rejected as claim 1, because claim 14 is claiming similar subject matter as claim 1.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munetsugu et al (6141431).

With respect to claim 1, Munetsugu discloses an image processing apparatus comprises: A data processing apparatus for processing form data of an object, said data processing apparatus comprising a modifying unit which modifies at least apart of the form data based on 2-dimensional image data of the object, (see figure 13, and col. 15, lines 6-20 and col. 16, lines 33-37, wherein, a face model is generated per the hair information from the face image) as claimed in claim 1. However, he did not explicitly disclose: 3-dimentional form data, as claimed in claim 1. But, it is well known that the model of the face is 3-dimentional.

Therefore, it would have been obvious to one ordinary skilled in the art to modify the Munetsugu's image processing system of hair removal on the face of the person in a model per the face image of the person by introducing the 3-dimesional form data as the face model, as it is well known in the art that a model is a 3-dimensional surface. This modification will provide a modifying unit that will modify a face of an object per the image of an object.

With respect to claim 2, he further discloses: a first generating unit which generates the 2-dimensional image data; and a second generating unit which generates the 3-dimensional form data of the object, (see col. 5, lines 35, region of the hair in the face image and col. 6, lines 19-20, a face model is generated) as claimed.

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With respect to claim 3, he further discloses: modifying unit extracts an area from the 2-dimensional image data based on a predetermined condition, and modifies the part of the 3-dimensional form data corresponding to the area, (see col. 5, lines 29-30, wherein, a hair region selecting part from 2-dimensional image and col. 5, lines 31-38, wherein the corresponding part on the model gets determined) as claimed.

With respect to claim 4, he further discloses: the object is a head of a human, (see figure 3) as claimed.

With respect to claim 5, he further discloses: the area corresponds to at least one of hair, a forehead, eyebrows, eyes, irises of eyes, and lips of the human, (see col. 5, lines 29-30, wherein the area is the hair of the object) as claimed.

Claims 6-8 is rejected as claims 3-5 as claims 6-8 are claiming similar subject mater as claims 3-5.

Claim 10 is rejected as claim 5 as claim 9 is claiming similar subject mater as claim 5.

With respect to claim 11, he further discloses: modifying unit modifies the 3-dimensional form data to emphasize a partial form of the object corresponding to the part, (see col. 15, lines 5-20 and col. 16, lines 35-43, wherein, hair is the partial data that gets emphasis, as that (hair) is gets deleted) as claimed. .

With respect to claim 12, Munetsugu discloses the invention substantially as claimed and as described in claim 10. However, he fails to disclose: smooth a partial form, as claimed in claim 12. But, it is obvious to smoothing the images during the image processing for blurring and for noise reduction, the blurring is used in preprocessing steps such as removal of small details from an image.

Therefore, it would have been obvious to one ordinary skilled in the art to modify the Munetsugu's image processing system of modifying the 3-dimentional model using two dimensional constraints by introducing the known feature of smoothing the images during the image processing for blurring and for noise reduction, the blurring is used in preprocessing steps such as removal of small details from an image, as it is known to have a smoothing of the images during the image processing for removal of small details from an image. This modification will provide a method that will modify the 3-dimentional form data that will use the smoothing of an images in order to remove the small details that is required by the 2-dimensional constraints.

With respect to claim 13, Munetsugu discloses the invention substantially as claimed and as described in claim 1. However, he fails to disclose: data processing apparatus is set in al specific mode, as claimed in claim 13. But, it is obvious that the system does not perform any function unless the apparatus is in active/on mode.

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Therefore, it would have been obvious to one ordinary skilled in the art to modify the Munetsugu's image processing system of modifying the 3-dimentional model using two dimensional constraints by introducing the known feature of on/off mode, as it is known to have a on/off mode in all the apparatuses to make it work or to keep inactive once the function is performed in order to conserve the energy. This modification will provide a method that will modify the 3-dimentional form data only in a given mode, or once the mode is set.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Munetsugu et al (6141431) as applied to claim 6 above, and further in view of

Applicants admitted prior art.

With respect to claim 9, Munetsugu discloses the invention substantially as claimed and as described above for claim 6. Also, he discloses: first area extraction, in claim 6 above. However, he fails to disclose: area division is carried out for a shade portion of the object by referring to the 2-dimensional image data of a surrounding portion. But, as mentioned in the specification on page 17, by the applicant that to perform a known technique for the shade position to get the good image.

Therefore, it would have been obvious to one ordinary skilled in the art to modify the Munetsugu's image processing system of modifying the 3-dimentional model using two dimensional constraints by introducing the known graphic techniques for shades to come up with a good image of the object, as it is admitted by the applicant. This modification will provide a method that will give good images.

Claims 14-35 is rejected as claims 1-13 as claims 14-35 are claiming similar subject matter as one of the combination of the claims 1-13.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 703.305.4510.

The examiner can normally be reached on 7:30 AM - 4:00 PM.

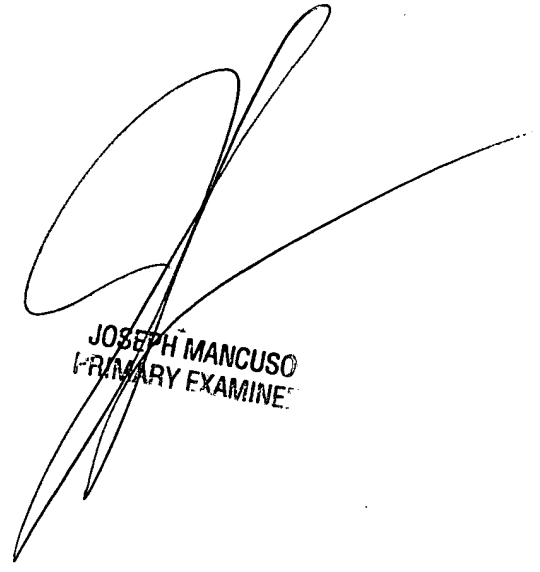
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703.308.6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703.306.5406 for regular communications and 703.306.5406 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4700.

Vikkram Bali
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Vb.
April 30, 2001



JOSEPH MANCUSO
PRIMARY EXAMINEE